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Axial Adjustable Tie-Down Stretch Cord Terminus

Related Application

This application is a continuation of application Serial No. 10/242,264 filed September 12, 2002.

5 Technical Field

This invention relates to a terminus for stretch cord, such as may be used for tie-downs, the position of which is adjustable along the stretch cord; the parts of the terminus are so positioned that loads applied thereto by the stretch cord are transferred to
10 substantially the center of the hook thereon.

Background Art

A widely used adjustable tie-down stretch cord is disclosed in U.S. Patent 5,682,652. Therein, a terminus for the stretch cord may be positioned anywhere along the stretch cord, the stretch cord
15 thereafter being locked into a cleat which is formed in a stem portion of the terminus. A hook extends from the opposite side of the stem for the cleat. One problem with this terminus is that axial loads imparted to the cleat, when the cord is locked therein, pull the hook in a manner which tends to cause it to rotate. Stated more simply,
20 the load is not applied to the center of the hook. A similar result obtains in an adjustable hook for bungee cord described in U.S. Patent No. Des. 417,386 in which the bungee cord becomes locked to the terminus at the backside of the hook, the cord extending
25 substantially tangentially of the hook, through a cam on the back side of the hook. The load applied by the cord therefor tends to rock the hook. Some hooks suitable for use with bungee cord provide the

load axially to the hook, but these are not adjustable. Examples are:
U.S. Patent Nos. Des. 409,899, 4,622,724, 5,317,788.

Disclosure of Invention

5 Objects of the invention include a stretch cord terminus, the
position of which can be adjusted along a stretch cord or bungee
cord, the cord then being locked to the terminus at the selected
position: which transfers the bungee cord load substantially axially to
the hook of the terminus; which does not involve rotation of the hook
as a result of loads imparted thereto; and which provides improved
10 performance in use.

 According to the present invention, the axis of a generally
circular hook on an axial, adjustable tie-down stretch cord terminus is
within a predetermined distance of the longitudinal axis of a cord
receiving bore in the stem of the terminus.

15 The invention transfers loads applied by the bungee cord to
substantially the center of the hook so that the hook does not rotate
in response to the load, as is common in prior art adjustable stretch
cord termini.

 Other objects, features and advantages of the present
20 invention will become more apparent in the light of the following
detailed description of exemplary embodiments thereof, as illustrated
in the accompanying drawing.

Brief Description of the Drawings

 Fig. 1 is a side elevation view of a terminus according to the
25 present invention.

 Fig. 2 is a top plan section taken on the line 2-2 of Fig. 1.

 Fig. 3 is a rear elevation view of the terminus of Fig. 1.

Fig. 4 is a side elevation section taken on the line 4-4 in Fig. 3.

Fig. 5 is a top plan section taken on the line 5-5 of Fig. 3.

Mode(s) for Carrying Out the Invention

5 Referring to Fig. 1, the terminus 8 comprises a hook 9 integrally joined with a stem 10. The hook has a generally cylindrical shape as illustrated in Figs. 1 and 4 and opens toward a first side (to the left in Figs. 1 and 4) of the terminus 8. The hook 9 defines a first end of the terminus 8 and the upper end as seen in Figs. 1, 3 and 4.

10 The stem 10 defines a second end of the terminus 8, the lower end in Figs. 1, 3 and 4, and has a cord receiving bore 13 extending from the second end, the diameter being suitable to receive a stretch cord 15 with which the terminus is to be utilized. The longitudinal axis 16 of the bore 13 is within a predetermined distance of the transverse axis 17 of the hook.

15 A cord passage 20 extends outwardly from the bore 13 at a distance from a second end 21 of the terminus 8. A cleat 24 opens at 25 into the cord passage 20 in such a fashion that when a cord extends through the bore 13 and passage 20 it may be pulled down into the cleat 24, as illustrated in Fig. 1, thereby locking the terminus to the cord.

20 A land 27 may be provided, if desired, to reduce the thickness of the anvil, to give the anvil a desired characteristic.

25 All of the aforementioned patents are incorporated herein by reference.

Thus, although the invention has been shown and described with respect to exemplary embodiments thereof, it should be

understood by those skilled in the art that the foregoing and various other changes, omissions and additions may be made therein and thereto, without departing from the spirit and scope of the invention.

I claim: